

PERSPECTIVES OF AUTISTIC OT STUDENTS AND PRACTITIONERS ON THEIR
SENSORY NEEDS, STRATEGIES USED, AND OT CURRICULUM

Thesis submitted to the faculty at Stanbridge University in partial fulfillment of the
requirements for the degree of Master of Science in Occupational Therapy

by

Jade Brinzo, Kelly Ceron, Niya Custer, and Janelle Garcia

Thesis advisor: Bill Wong, OTD, OTR/L

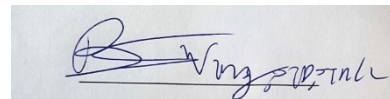
Co-Collaborators: Caroline Mills, PhD, OTR/L, Kitty Foley, PhD, OTR/L and Moira
Peña, BScOT, MOT

November 2023

© 2023
Jade Brinzo, Kelly Ceron, Niya Custer & Janelle Garcia
ALL RIGHTS RESERVED

Certification of Approval

I certify that I have read *Perspectives of Autistic OT Students and Practitioners on their Sensory Needs, Strategies Used, and OT Curriculum* by Jade Brinzo, Kelly Ceron, Niya Custer, and Janelle Garcia, and in my opinion, this work meets the criteria for approving a thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Occupational Therapy at Stanbridge University.



Bill Wong, OTD, OTR/L



Myka Persson
boxSIGN 1R6/V6ZX-1923QQJ3

Myka Persson, OTD, OTR/L

Program Director, Master of Science in Occupational Therapy

Acknowledgements

We would like to acknowledge and express our deepest gratitude to our thesis advisor, Bill Wong, OTD, OTR/L for making this research possible. We would not have been able to carry out this study without his expertise, guidance, and support. We would also like to thank our international collaborators Caroline Mills, PhD, OTR/L, Kitty Foley, PhD, OTR/L and Moira Peña, BScOT, MOT for their time in providing feedback and assistance in regard to our findings. We would also like to thank Dr. Shain Davis for teaching the foundational information in our research methods course and for providing us extra assistance throughout our curriculum. Lastly, thank you to Mr. Frederick Poling, Ms. Shaina Phillips, and Dr. Michael Mahoney for dedicating their valuable time in providing us with editorial feedback on our project.

Abstract

Introduction: Our study focuses on the perspectives of autistic occupational therapy (OT) students and practitioners regarding their sensory needs, sensory modulation strategies, and OT curriculum. This qualitative study utilized semi-structured interviews to better capture the sensory experiences of our participants. **Objective:** The purpose of this study is to gain insight on the perspectives of autistic OT and occupational therapy assistant (OTA) students and practitioners from the United States on their sensory needs and how their engagement with the OT/OTA curricula has influenced their sensory modulation strategies during their time in school and as practitioners in the field.

Methods: Participants were recruited through fliers posted on CommunOT, DisabilOT, a Facebook page titled, “Occupational Therapy New Grads and Students,” and through our primary advisor’s network. Our sample size consisted of 8 participants: 6 practitioners (5 occupational therapists and 1 OTA) and 2 students. The gender distribution was 7 women to 1 man. Semi-structured interviews were conducted via Zoom then transcriptions of interviews were analyzed into finding recurring themes and patterns. **Results:** Three themes have emerged regarding their sensory experiences throughout school and/or in practice: gaining autonomy, experiencing ableism, and strengthening sensory integration within OT curricula. **Conclusion:** Our study suggests that OT curriculum has a significant impact on sensory modulation strategies. Common themes mentioned among participants included autonomy, ableism, and the need to strengthen sensory integration throughout the lifespan in OT curriculum.

Table of Contents

Introduction.....	1
Literature Review.....	3
Remaining Gaps Evidence.....	8
Theoretical Framework.....	9
Methodology.....	12
Ethical and Legal Considerations.....	14
Results.....	16
Discussion.....	20
Limitations.....	22
Conclusion.....	22
References.....	25
Appendix A: Interview Guide.....	28
Appendix B: Institutional Review Board Approval.....	30

Perspectives of OT Autistic Students and Practitioners on their Sensory Needs, Strategies Used, and OT Curriculum

Autism spectrum disorder (ASD) is characterized as a developmental disability in which an individual faces challenges in social communication, and interaction, along with exhibiting restricted or repetitive behaviors and interests (Centers for Disease Control and Prevention, 2023). The prevalence of ASD has increased in the United States, as it affected 1 in 44 children in 2018 to now affecting 1 in 36 children (Centers for Disease Control and Prevention, 2023). Autistic individuals implement sensory modulation strategies to regulate their sensory needs throughout their daily lives. Symptoms vary from each individual, therefore resulting in a wide variety of unique responses. Dunn's Model of Sensory Processing presents three primary features: consideration of an individual's reactivity to a certain sensory threshold, consideration of one's regulation strategy, and consideration of the interaction between reactivity to threshold and responding strategy (Dunn, 2001). Four sensory profiles have been created to showcase the different types of reactivity and regulation: low registration, "high thresholds with passive responding strategies," sensory seeking, "high thresholds with active responding strategies," sensory sensitivity, "low thresholds with passive responding strategies," and sensory avoiding, "low thresholds with active responding strategies" (Dunn, 2001, pp. 611-612). Those who have passive responding strategies are usually unaware of the sensory input, therefore have a low threshold, whereas those who have active responding strategies tend to enhance or seek out sensory experiences (Dunn, 2001). For the purpose and consistency of this thesis, we will be referring to Dunn's

definition of sensory processing and utilizing the Model of Sensory Processing (Dunn, 2001).

The issue is that there are multiple definitions of “sensory modulation” and “sensory sensitivities” that are contradictory throughout literature making it difficult to establish a clear understanding of the terms and implications for individuals with sensory processing issues. There is also a lack of research regarding autistic occupational therapy (OT) students and perspectives on OT curriculum. We are examining the impact of the OT school curriculum since this may be the first-time autistic OT and occupational therapy assistant (OTA) students encounter the topic of sensory modulation. According to the American Occupational Therapy Association (AOTA, 2018), the Accreditation Council for Occupational Therapy Education set the standard of a pediatrics course being mandatory in both OT and OTA curricula programs. Given that pediatric courses commonly introduce sensory modulation strategies, our discussion on the OT curriculum will encompass both OT and OTA programs for the purpose of this study. We seek to understand the curriculum’s impact on autistic students and practitioners' knowledge and utilization of their own preferred sensory modulation strategies throughout their daily lives. The aim is to gain insight on their sensory needs, and how they use their preferred sensory modulation strategies to navigate school, work, or any meaningful occupations. This leads to our research question: How has OT curriculum influenced autistic OT and OTA students and practitioners in their own utilization of sensory modulation strategies? Our findings may be beneficial to other autistic OT and OTA students and practitioners who share similar sensory struggles and provide valuable insight into how OT curriculum may be improved.

Literature Review

The purpose of our literature review was to help assess the gap and observe any common themes in research regarding our topic. Through conducting our literature review we identified multiple definitions of “sensory modulation” that can be considered controversial. Although there is a lack of research regarding our population, we found a multitude of articles involving research with the autistic pediatric population and the related sensory modulation strategies found to be successful within this age group.

One of the common themes we have found among our literature review is the psychological effects of having sensory-processing difficulties. Several studies have addressed the importance of sensory modulation and how atypical behavior can lead to negative symptoms such as anxiety, distress, and depression. A study done by Ben-Avi et al. (2012) examined the sensory processing patterns of normally healthy undergraduate students and investigated whether there were any linked psychological symptoms. It discussed the four sensory processing patterns: sensory sensitivity, sensory avoiding, sensory seeking, and low registration. Results show that those with sensory sensitivity, sensory avoidance and low registration patterns have a stronger tendency to present negative psychosocial symptoms such as anxiety and lack of self-efficacy. While Yano et al. (2019) focused on depressive symptoms on university students based on their sensory-processing preference, Ben-Avi et al. (2012) focused on psychological symptoms in healthy individuals. Both studies’ results have shown that the more severe sensory-processing sensitivity, the more likely individuals will display symptoms of depression, anxiety, and distress.

Another common theme is lived experiences, which involves understanding autistic individuals' sensory experiences. According to DePape and Lindsay (2015), lived experiences represent an individual's encounters and their responses to these experiences. While qualitative studies of current synchronous life experiences of autistic OT and OTA students and practitioners remain limited, qualitative studies focusing on autistic individuals' experiences outside of OT are beginning to provide valuable insights into a wide range of important aspects of autistic adulthood and interventions used.

To find strategies that aid individuals with ASD through sensory processing struggles, it is important to understand the forms of sensory processing and how it impacts having trouble responding to sensory stimulation resulting in behaviors that can be excessive in relation to the stimulus (Ashburner et al., 2013). It was determined through a meta-analysis that autistic children experience greater under-responsivity which is filled by over-responsivity and then sensation seeking when compared to typically developing children. To better understand sensory processing within autistic individuals, Ashburner et al. (2013) completed a study that investigated how autistic individuals experience sensory input as well as what strategies they may use to manage sensory issues that impact their day-to-day life. This study was facilitated through semi-structured interviews augmented with visual cues which allowed for firsthand observations of how autistic individuals are affected by sensations (Ashburner et al., 2013). The study's findings indicated that the physiological responses to sensory input were diverse, as some autistic children reported low-responsiveness to sensation while other autistic children reported over-responsiveness to sensation. It was found that some sensory domains were more pleasant or manageable than others. All participants found

listening to music, video game sounds, and movie sounds enjoyable while other sounds such as people breathing, sudden high-pitched sounds, hand dryers, or extraneous noises were strongly disliked (Ashburner et al., 2013). Visually, all participants were drawn to bright colored lights, though some expressed visuals such as firelight 'hurting' their eyes. Patterns of color or geometrics were both enjoyable and distracting to the participants. Smells that were enjoyable varied for all the participants, but it was found that chemical smells from cleaning products or chlorines were disliked by all the participants (Ashburner et al., 2013). For sensations of taste, the participants enjoyed a limited range and would often eat the same thing repeatedly. Touch sensations varied for every individual with some enjoying the feel of some fabrics such as wool or rubber while others enjoyed the feel of animals and sticky objects (Ashburner et al., 2013).

Enjoyable movement sensations were more linked to being very active, while unpredictable acts such as tripping or swinging were dislikes. Avoidance techniques such as removal, alternating space, avoidance, and blocking were utilized by the participants for sensations that were seen as distracting. However, avoidance was also seen for stimuli that were needed (Ashburner et al., 2013). One participant disliked the smell, taste, and texture of many foods and became very underweight as they refused to eat. All participants were seen to prefer sensory stimulations when they were expected and within their own control (Ashburner et al., 2013). This allowed them to control what sensory stimuli they would be interacting with and enjoy.

The third theme we found is implementing classroom strategies to support better learning within educational settings. The need for strategies within the classroom is evident as students with mental disabilities are unable to perform to their highest

potential. While Mulligan (2001) focused on implementing classroom strategies in a school setting with students with attention deficit hyperactivity disorder (ADHD), Mills et al. (2020) examined the efficacy of a sensory activity schedule used in a school setting with autistic students. Each contributes knowledge about interventions that are helpful for improved learning by measuring outcomes such as health, social, cognitive, and occupational functioning, as well as task mastery and occupational performance. The articles differ in the population being studied and type of measurements taken. Mulligan (2001) distributed surveys to general education teachers and gathered their perspectives on the effectiveness of classroom strategies for students with ADHD. Results showed six common themes: increased support personnel in the classroom, specific teaching strategies, smaller class sizes, more education and training, parent support and involvement, and teacher attitudes (Mulligan, 2001). This shows that modifications for students with ADHD are necessary for success.

Mills et al. (2020) focused on assessing the impact of using a sensory activity schedule compared to not using one in a classroom setting. They investigated autistic students using the perceive, recall, plan and performance (PRPP) stage one procedural task analysis. Students' performance was assessed using PRPP at baseline and post-intervention. Teachers with some previous knowledge of sensory processing volunteered and were asked to select one to three of their autistic students aged four to 12 years old who had been identified to have atypical sensory processing which affected their school participation. During the teachers' observations of the students, they assessed each cognitive strategy the student used and rated how effectively it was used according to the task at hand (Mills et al., 2020). The clinical importance of the study showed the analysis

of students' overall cognitive performance was measured by the PRPP Stage Two total scores revealed that while students in both groups improved, the students that used the sensory activity schedule improved more than the students that received the normal teaching methods set by the schools (Mills et al., 2020). The research study used PRPP Stage Two Cognitive Task Analysis to demonstrate the impact that specific adjustments to students' sensory needs and schedules can be beneficial. The study demonstrated how the implementation of these specific adjustments designed and tailored to the needs of the students can create a positive impact and enhancement on the cognitive strategies used to improve their overall classroom participation.

The last common theme we found is sensory modulation interventions among individuals with mental health disabilities. Several studies addressed effective interventions regarding sensory modulation in people with sensory-processing difficulties. While Machingura et al. (2022) focused on evaluating the outcomes of sensory modulation interventions for schizophrenic individuals, Barbic et al. (2019) focused on the utilization of sensory modulation rooms in an inpatient psychiatry setting. Machingura et al. conducted an observational cohort study using a waitlist control. Pre- and post-test interventions were implemented on 30 schizophrenic patients, while 11 schizophrenic patients acted as a control group. Interventions focused on self-awareness in regard to their sensory preferences and applying this knowledge within their daily life (Machingura et al., 2022). Although there were no significant differences between the two groups, there was significant improvement from the pre- and post-test group who received the sensory interventions in terms of distress, health, social, and occupational functioning measures (Machingura et al., 2022).

Barbic et al. (2019) conducted semi-structured interviews gathering the perspectives and experiences of the sensory modulation rooms from health providers and service-users. The interviews presented four common themes: service user empowerment through self-management, emotional regulation, alternative to current practices, and health provider and service user education. Overall, service-users and health providers had positive experiences with the sensory modulation rooms as the service-users “learn emotional self-management skills, gain a sense of control, and focus on personal recovery” Barbic et al., 2019, p. 11). Both populations showed positive results from their sensory modulation interventions.

Remaining Gaps in Evidence

In terms of sensory modulation for autistic OT students and practitioners, research is extremely limited since this is a very specific population. However, there are several studies that pertain to students, both autistic adolescents and adults, and their sensory modulation strategies. Our study aims to close the gap in research by providing insight on the perspectives of autistic OT and OTA students and practitioners regarding their sensory needs and how the sensory modulation strategies they use were influenced by the OT curriculum.

Sensory modulation strategies are relevant and necessary for students to gain optimal individual sensory-processing skills. Several studies we discussed addressed the importance of sensory modulation and how lack of regulation of atypical behavior and skills can lead to negative symptoms such as anxiety, distress, and academic struggles. Ben-Avi et al. (2012) research provides clarity in regard to what typical and beneficial sensory processing may look like to better support the academic needs of students.

Through the study conducted by Ashburner et al. (2013), it was determined the predictable and controllable nature of experiencing sensations affects the overall enjoyability of the stimulation itself. Mills et al. (2020) research demonstrated the impact of implementing a sensory activity schedule which sensory modulation strategies are used by autistic students and practitioners, our study aims to compare the different modulation strategies that autistic students and practitioners utilize within their educational and professional settings. Gaining these sensory processing skills will support their needs, achieve academic success, and improve quality of life. It is crucial for occupational therapists to understand how interventions and strategies are catered to certain individuals and how this will enhance learning skills to support academic needs.

Theoretical Framework

The framework that best aligns with our study is the Person-Environment-Occupation (PEO) model, which is a common theory utilized in the field of OT. The PEO model can be applied to a multitude of different environments and target populations. It consists of three components: the person, the environment, and the occupation. The outcome of this transactional relationship is occupational performance, which is defined as, “the dynamic experience of a person engaged in purposeful activities and tasks within an environment” (Law et al., 1996, p.16). Because OT is a client-centered practice, the client is viewed holistically, taking into consideration all contextual background information. The “person” is the individual who may have various roles and responsibilities throughout their lifespan (Law et al., 1996). This individual is viewed holistically from a social, emotional, spiritual, and physical standpoint. The “environment” considers the surroundings and settings the individual participates in. This

may be a “unique perspective of the person, household, neighborhood, or community” (Law et al., 1996, p. 16). The environment of the person heavily influences their decision-making and behaviors. The “occupation” may range from activities of daily living to activities that allow the person to fully participate within their communities, “they are pluralistic and complex, and a necessary function of living” (Law et al., 1996, p.17). As these three components create three circles, an overlap is created to signify occupational performance. This applies to our thesis by how autistic OT and OTA students and practitioners rely on sensory modulation strategies to regulate their sensory needs within their environment, whether in a social, educational, or professional setting, to better improve their engagement in their meaningful occupations. We will be examining the lived experiences of our participants and see the interaction between all three components that affect their occupational performance.

Where our thesis is concerned, autistic OT and OTA students and practitioners make up the “person” component of the PEO model. Occupational performance will be examined through asking our participants a variety of questions regarding their sensory experiences and how they overcame these situations. A common comorbidity of ASD is having a sensory modulation disorder, when an individual has difficulty regulating their sensory needs with behavior that is related to intensity of the sensory information (Miller et al., 2007). According to Ashburner et al. (2013), autistic young people were more sensitive to sensory stimuli, causing them to act avoidant and prefer familiarity. A common theme found among the literature was that sensory modulation strategies improve autistic individuals’ engagement within their environments. The use of therapy balls within a classroom for children with learning disabilities improved motivation and

decreased unwanted behaviors (Goodmon et al., 2014). We will be asking our participants relevant background information, such as asking if they are currently a student or practitioner and their sensory modulation strategies used throughout their school and work experiences. This will give us a better understanding of the participants' abilities to adapt to the sensory challenges they may encounter daily.

The "environment" component of the PEO model will be examined through asking our participants how their interaction with the environment influences their behaviors and decisions. Environmental factors include not just physical, but social and cultural factors as well. In a study conducted by Cai and Richdale (2015), autistic students in higher education were asked about their educational experiences and satisfaction levels regarding any reasonable accommodations that were provided to them. The majority have stated their educational needs were met through making special arrangements for exams and assignments, lectures, or classroom aids for behavioral issues etc. However, students did not feel emotionally supported by the staff. Students had negative comments regarding support staff attitude, their lack of knowledge of ASD, and inaccessibility to counselor appointments, which resulted in feelings of anxiety and depression. We created an interview guide which consisted of questions regarding reasonable accommodations participants received in their time in school. We examined if their environment was conducive to their learning abilities and mental health.

Our interview guide also asked questions regarding the "occupation" component. This was examined through asking our participants what occupations they engage in based on their interests, and any occupations they are expected to do based on their roles and responsibilities. Occupations allow the individual to satisfy their intrinsic needs for

self-maintenance, self-expression, and fulfillment within the context of their personal roles and environment (Law et al., 1996). Since our participants are either still in school or working, they are expected to fulfill the roles of a “student” or “practitioner,” in addition to any social, cultural, or familial roles at home. They should also be familiar with the utilization of sensory modulation strategies and their importance. Our study focused on the impact of OT curricula; therefore, we asked the participants if they had any prior knowledge of sensory modulation strategies before attending school, and if their perspectives changed during/after school. If diagnosed with ASD before attending school, we also asked if participants implemented any sensory modulation strategies beforehand and if they implemented any strategies during their time in school, specifically fieldwork or capstone experiences. Having a sense of the participants’ understanding of sensory modulation strategies gave us insight into how much OT curricula has impacted their knowledge.

Methodology

For this qualitative descriptive study, we utilized semi-structured interviews to gather perspectives from autistic OT and OTA students and practitioners regarding their sensory modulation strategies. This study explored how OT curriculum has influenced autistic OT and OTA students and practitioners’ knowledge on sensory modulation strategies and how they implement these strategies during their time in school, work, and meaningful activities. All participants met the following criteria: must be at least 18 years or older, must have a formal diagnosis of ASD, and must be a student in an OT/OTA program or OT practitioner in the United States. Individuals with co-occurring conditions alongside their initial ASD diagnoses were also eligible for participation. Those without a

formal diagnosis documentation of ASD were excluded from participating. Prior to data collection, an interview guide was created with the aim of reducing researcher bias. Our principal investigator, Dr. Bill Wong, and our professional collaborators, Dr. Caroline Mills, Dr. Kitty Foley, and Ms. Moira Peña reviewed our interview guide from their perspectives to ensure it met our participants' needs. We used forums CommunOT, DisabilOT, and a Facebook group page called "Occupational Therapy New Grads and Students," to recruit and identify eligible participants. After establishing eligible participants, we contacted them to schedule an interview. Throughout the semi-structured interview, we asked the participants nine questions about their personal experiences, schooling, clinical experiences, accommodation needs, etc. We conducted one-on-one interviews, which consisted of one researcher and one participant. Interviews lasted approximately 45-60 minutes and were held on Zoom. As soon as each interview was completed, a sharable link to access the transcript of each interview was sent to the study's email. We then identified recurring themes and patterns, with collaboration from our primary advisor in the coding process. All identifiable data were de-identified using codes and stored in the password protected Google Drive.

The target population for this qualitative study consisted of autistic OT and OTA students and practitioners in the United States. Given the exploratory nature of this study and the qualitative research design, the focus was on in-depth interviews with a purposeful sample of participants who can provide insights into their experiences and perspectives. The interview guide was made available to participants upon request via email, allowing them to follow along during the interview if needed.

As a qualitative study, this research did not involve the use of traditional statistical tests. Thematic analysis was utilized to identify and analyze recurring themes and patterns within the interview data. This methodology is well-suited for investigating the perspectives and experiences of autistic OT and OTA students and practitioners in relation to sensory modulation strategies and their use during education, work, and meaningful activities. To protect the identity and confidentiality of our participants, our collaborators Dr. Mills, Dr. Foley and Ms. Peña received a summary of our findings without identifiable information. Data will be destroyed three years after cessation of study. Since our study may be the first of its kind, findings can contribute to future research in this topic. Refer to Appendix A for the interview guide.

Ethical and Legal Considerations

Prior to the data collection process, we met with our collaborators Dr. Mills, Dr. Foley, and Ms. Peña privately without our advisor present to develop the first draft of our interview guide. To ensure there was also stakeholder input, we met with our thesis advisor who helped us review our interview guide prior to developing the finalized version. Our advisor, Dr. Wong, disclosed his conflict of interest to us and the collaborators prior to the start of the study. This is due to the fact our participants might know of him through social media through their own training to become OT practitioners. In addition, he is also actively involved in the OT profession. Due to the association of participants involved in a qualitative study having a range of legal and ethical issues, verbal consent forms approved by Stanbridge University Institutional Review Board were sent and signed by each participant prior to the interview process. Once we received the signed consent forms, it was expected that participants understood their participation in

this study is voluntary and the potential risks associated with participating. Video release forms were also provided prior to interviewing to ensure participants acknowledged the recording and transcribing for data analysis purposes. Participants were also made aware that all protected data on the password protected database will be destroyed three years after the cessation of our study.

Other ethical and legal considerations include the risks our participants may be exposed to and how we minimize these risks to ensure safety. As a participant in this study, there may be minimal risks of exposure to discomfort that could pose psychological risks and/or physical risks. There is no more than minimal physical risk that may include eye strain from staring at a computer for an extended amount of time during the interview process. As a method to minimize eye strain, participants were able to take breaks as needed to facilitate the interview process or provide time to recuperate. Participants were also allowed to turn off their camera, if necessary. There is also minimal psychological risk, which included emotional distress towards answering certain questions that may include recalling distressing events where modulation strategies were needed to be implemented. If at any time participants felt uncomfortable answering questions, they may choose to skip the question and move onto the next. This option was provided so that participants do not feel pressured into answering questions, ensuring their comfortability throughout the interview. If at any point during the interview process, participants felt they could not continue with the interview due to distress or lack of time, we would reschedule at a future date or time. After the interview was conducted, audio transcriptions were created to help facilitate our data analysis. All data was collected and placed in a password protected database where participants were de-identified during the

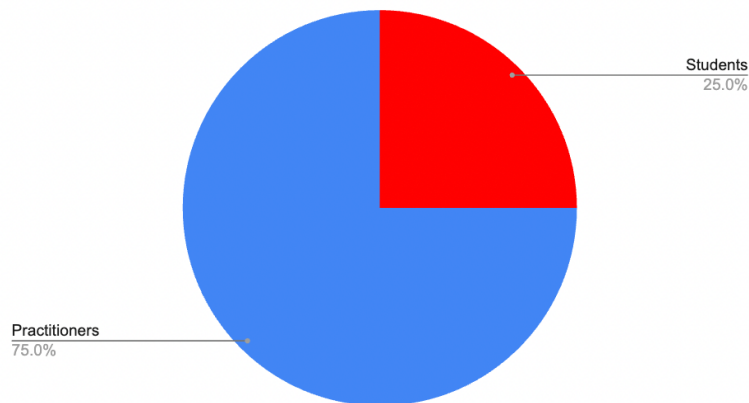
research process. Participants understood that all data will be destroyed after completion of research in November 2026. To ensure confidentiality, identified data will not be published, presented in any conferences, nor publicly made available. However, select quotes from de-identified participants may be used in the future. Additionally, due to our collaborators' status in the study, they did not have direct contact with our participants nor access to our video recordings and transcriptions. Our collaborators received a summary of our findings to protect our participants' identities.

Results

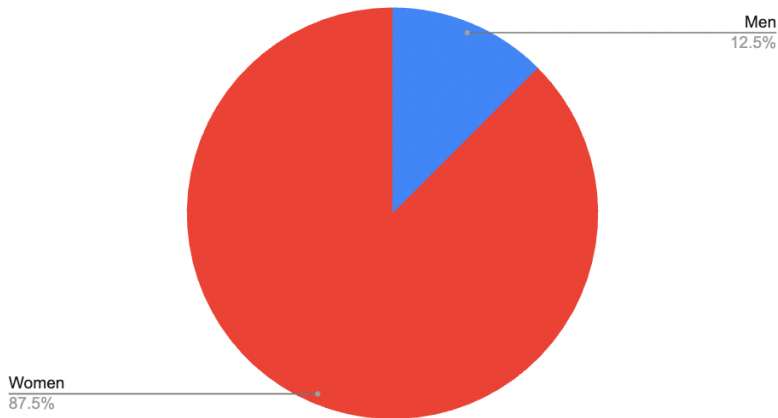
A total of 8 participants were interviewed via Zoom comprising 6 OT practitioners (5 occupational therapists and 1 OTA), and 2 OT students, as shown in figure 1 below:

Figure 1:

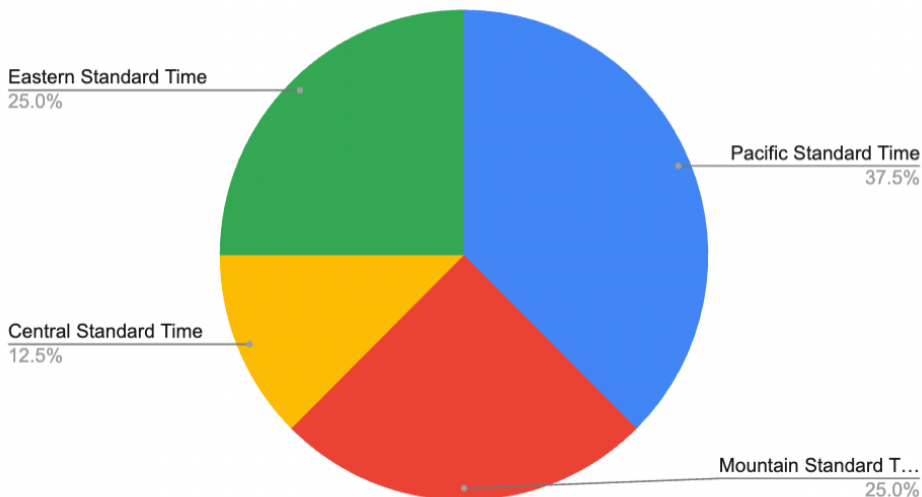
Chart of Participants' Occupations



In terms of gender distribution, the group consisted of 7 women and 1 man as shown in figure 2.

Figure 2:*Chart of Gender Distribution*

We had participants from diverse locations to gather a broader range of perspectives on their OT curriculum. Specifically, three participants were in the PST time, two in MST, one in CST, and two in EST. Since we had 2 participants that are currently still students, their experiences would only entail their time throughout their educational journeys. This distribution is shown in figure 3.

Figure 3:*Chart of Participants' Time Zones*

Throughout interviews, all participants have stated that they experience sensory issues as it impacts daily functioning. We anticipated that our participants would experience sensory issues as it is a common symptom among autistic individuals. Utilizing thematic analysis, a few common themes have emerged regarding the participants' sensory experiences, sensory-specific accommodations, and sensory modulation strategies they have implemented throughout their time in OT school and/or their time in practice. The first emerging theme was gaining increased autonomy post-graduation from an OT program, reflecting a shift in the participants' professional lives. Five participants have stated that as a student, they felt constrained and limited in their ability to tailor the environment to their liking for better productivity. Now that they are practitioners, they have found a new type of independence that allows them to tailor their work setting to their liking, which fosters flexibility and enhances efficiency. For example, participant #5 stated, "I'm just working from home, so my home is like my sanctuary. I can kind of control the environment, it's super quiet. There are minimal distractions, very low sensory stimulation." Participant #3 also agreed as they stated, "Now that I am a practitioner, I am my own boss and I determine how the environment is set up. I determine what things need to happen." The OT curriculum has influenced their understanding of their sensory experiences, leading to heightened awareness of creating an ideal working environment and applying strategies that suit their needs the best. They have come to recognize the significance of applying strategies that align with their sensory needs, ultimately contributing to their overall effectiveness and well-being in their professional roles.

The second emerging theme among our participants was the experience of ableism. According to Lindsay et al. (2023), ableism is defined as a form of discrimination that displays unwarranted and abusive behaviors towards those with disabilities. This type of discrimination is harmful as it can lead to mental health issues, like decreased self-efficacy and depression. Participants recalled experiences in which they felt discriminated against for their disabilities, hindering their full participation in their respective settings. As participant #6 describes, “I mask very heavily, and so I’m basically unwilling to use any regulatory strategies that could make me look different or weird or quirky which often impairs my ability to function, or at least function to the best of my ability.” This participant’s experience highlighted the internal struggle many neurodivergent individuals face in deciding how much they are willing to conform to societal norms to avoid judgment. The same participant stated, “It’s a constant conflict on how weird am I willing to seem in this situation? Am I willing to do things that will be regulating for me or not? Who am I around? Do I feel safe around this person? Are they going to judge me for this?” These reflections emphasize the strong impact of ableism on the daily existence and functioning of individuals with neurodivergent conditions. Participant #8 describes a situation during fieldwork where staff found out about their autism diagnosis and secluded them, “They found out that I am autistic and were uncomfortable with me working with patients, instead I was forced to sit in their file room doing paperwork the whole time I was in fieldwork.” The participant was unhappy with how this site reacted to their diagnosis, ultimately impacting their hands-on experiences during fieldwork, and making them feel like they could not be trusted with patients.

The third emerging theme was the need to strengthen sensory integration within OT curricula. While sensory integration is covered in OT curricula, participants expressed that its coverage is not as comprehensive as they believe it should be. As stated by participant #7, “Autism should be presented by autistic people who can describe first-hand experiences, so students can start making connections between curriculum and real life.” This participant explained the importance of hearing about autistic individuals’ experiences to learn how autism impacts individuals differently, such as sensory integration, creating a better picture for students and practitioners to understand and promote client-centered, inclusive approaches to the neurodivergent population. In summary, the perspectives of our participants highlight critical issues that need to be addressed to better support both autistic students and practitioners.

Discussion

The core principles outlined in AOTA Vision 2025 highlight occupational therapy’s commitment to inclusivity, health optimization, and enhancing the quality of life for individuals across various populations and communities (AOTA, 2016). This vision also emphasizes the importance for OT education to evolve to better serve the diverse needs of the clients we aim to help. The current level of information provided in textbooks can be considered basic, particularly in the adult-focused context. It is important for the educational materials to delve deeper into the complexities of adult OT to acknowledge the unique challenges and needs of this population. We recommend authors of OT and OTA textbooks to consider autistic OT practitioners in contributing their knowledge and experiences to these learning materials. Sensory integration is a crucial component of OT and should be distinctly integrated into the curriculum. Sensory

integration is widely seen in pediatrics but should continue to be covered in adult and gerontology courses. The syllabi for OT curricula should emphasize the importance of autistic experiences throughout the lifespan. This would provide future therapists with the knowledge and skills to effectively address sensory processing differences. Incorporating sensory integration throughout the educational process will allow OT practitioners to better understand and implement personalized sensory modulation strategies that cater to the specific requirements of each client.

Regarding student preparation, having autistic mentors can be instrumental in helping aspiring occupational therapists get firsthand insight into the challenges and opportunities of working in the field, particularly with neurodivergent individuals. However, not everyone is comfortable disclosing their diagnosis. We took into consideration that our primary advisor is on the Coalition of Occupational Therapy Advocates for Diversity Fieldwork Task force. The task force focuses on supporting the needs of fieldwork students from diverse backgrounds. This applies to our research as we asked our participants about accommodations they might have received. This emphasizes the significance of OT and OTA program educators of creating a social network and establishing connections with autistic OT students and practitioners in the field. Given our primary advisor's role as one of the co-facilitators of AOTA's Autism Community of Practice group, he is aware of the increasing participation of autistic OT students and practitioners in this group since taking on that responsibility. As a result, we advocate for academics to foster more relationships within this compact yet expanding community.

Limitations of the Project

This study was subject to a few limitations that should be acknowledged. First and foremost, not everyone is comfortable in disclosing their diagnoses, therefore, it may not fully represent the diversity of the autistic OT student and practitioner population. The sample population of this study was also limited due to the research's affiliation with our primary advisor who is well known in the OT profession. This association with the AOTA and his active presence in the field caused a level of familiarity with all the participants, potentially leading to a sample that may not fully represent the diversity of the autistic OT student and practitioner population. We have discovered limitations through the gender distribution within the sample. Gender distribution was skewed, consisting primarily of women (7 women, 1 man). While it is representative of OT profession, this is not reflective of the current demographics of prevalence in autism diagnoses. Lastly, individuals who chose to participate may have unique characteristics or experiences that differ from those who did not. This bias could affect the generalizability of our findings to a wider population of autistic OT students and practitioners. While this study provides valuable insight into a specific group informing autistic OT students and practitioners, it is important to acknowledge it may not represent the experiences of the whole autistic community.

Conclusion

Our thesis explored the domain of ASD and the significance of sensory modulation strategies for autistic individuals, particularly focusing on autistic OT and OTA students and practitioners. ASD is a complex developmental disability that impacts an individual's social communication, interaction, and behavior (Centers for Disease

Control and Prevention, 2023). Sensory modulation strategies play a crucial role in helping autistic individuals regulate their sensory needs and cope with everyday challenges. Through a comprehensive literature review, a few common themes emerged. The psychological effects of sensory processing difficulties were explored with studies showing a correlation between sensory-processing sensitivity and symptoms of anxiety and depression. Lived experiences of autistic individuals provided valuable insights into their sensory preferences and aversions, leading to a better understanding of how sensory modulation can positively impact their lives. Strategies within educational and mental health settings were also examined, highlighting the effectiveness of tailored strategies in improving cognitive functioning and overall well-being. Despite the significance of sensory modulation for autistic individuals, the existing literature reveals contradictions and inconsistencies in defining "sensory modulation" and "sensory sensitivities." To address this issue, this study adheres to Dunn's Model of Sensory Processing and utilizes a qualitative approach to explore the perspectives and experiences of autistic OT and OTA students and practitioners with respect to sensory modulation strategies (Dunn, 2001). While there is limited research specifically focusing on autistic OT and OTA students and practitioners, this study seeks to contribute valuable insights to the field. By understanding the impact of OT curriculum on the utilization of sensory modulation strategies, this research can pave the way for tailored interventions, improved academic performance, and enhanced quality of life for this unique population. Hearing the experiences of our participants provided valuable insight into firsthand experiences on sensory integration, as well as having sensory integration throughout the lifespan be a focal point in OT curriculum. The findings from this study provide a deeper

understanding of how sensory modulation strategies can support the needs of autistic OT and OTA students and practitioners, both in their educational journey and their professional lives. The knowledge gained from this research can guide future interventions and educational practices to better support individuals with ASD and their sensory processing challenges. Ultimately, this study aimed to contribute to the advancement of knowledge in the field of sensory modulation and its application within the OT domain, leading to improved outcomes and enhanced well-being for autistic individuals.

References

- American Occupational Therapy Association. (2016). *About AOTA: Mission and vision*. https://www.aota.org/about/missionvision_ga=2.12224881.490716588.1697335229-884171407.1692332706
- American Occupational Therapy Association. (2018). 2018 Accreditation council for occupational therapy education (ACOTE®) standards and interpretive guide. *The American Journal of Occupational Therapy*, 72(Suppl. 2), S1-S83. <https://doi.org/10.5014/ajot.2018.72S217>
- Ashburner, J., Bennett, L., Rodger, S., & Ziviani, J. (2013). Understanding the sensory experiences of young people with autism spectrum disorder: A preliminary investigation. *Australian Occupational Therapy Journal*, 60(3), 171–180. <https://doi.org/10.1111/1440-1630.12025>
- Barbic, S. P., Chan, N., Rangi, A., Bradley, J., Pattison, R., Brockmeyer, K., Leznoff, S., Smolski, Y., Toor, G., Bray, B., Leon, A., Jenkins, M., & Mathias, S. (2019). Health provider and service-user experiences of sensory modulation rooms in an acute inpatient psychiatry setting. *PLoS ONE*, 14(11), 1-15. <https://doi.org/10.1371/journal.pone.0225238>
- Ben-Avi, N., Almagor, M., & Engel-Yeger, B. (2012). Sensory processing difficulties and interpersonal relationships in adults: An exploratory study. *Psychology*, 3(1), 70-77. <https://doi.org/10.4236/psych.2012.31012>
- Cai, R. Y. & Richdale, A. L. (2015). Educational experiences and needs of higher education students with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 46(1), 31–41. <https://doi.org/10.1007/s10803-015->

2535-1

Centers for Disease Control and Prevention. (2023). *Autism prevalence higher, according to data from 11 ADDM communities.*

<https://www.cdc.gov/media/releases/2023/p0323-autism.html>

DePape, A.-M., & Lindsay, S. (2015). Lived experiences from the perspective of individuals with autism spectrum disorder. *Focus on Autism and Other Developmental Disabilities, 31*(1), 60–71.

<https://doi.org/10.1177/1088357615587504>

Dunn, W. (2001). The sensations of everyday life: Empirical, theoretical, and pragmatic considerations. 2001 Eleanor Clarke Slagle lecture. *The American Journal of Occupational Therapy, 55*(6), 608-620. <https://doi.org/10.5014/ajot.55.6.608>

Goodmon, L. B., Leverett, R., Royer, A., Hillard, G., Tedder, T., & Rakes, L. (2014). The effect of therapy balls on the classroom behavior and learning of children with dyslexia. *Journal of Research in Education, 24*(2), 124-141.

<https://files.eric.ed.gov/fulltext/EJ1098182.pdf>

Law, M., Cooper, B., Strong, S., Stewart, D., Rigby, P., & Letts, L. (1996). The person-environment-occupational model: A transactive approach to occupational performance. *Canadian Journal of Occupational Therapy, 63*(1), 9-23.

<https://doi.org/10.1177/000841749606300103>

Lindsay, S., Fuentes, K., Tomas, V., & Hsu, S. (2023). Ableism and workplace discrimination among youth and young adults with disabilities: A systematic review. *Journal of Occupational Rehabilitation, 33*(1), 20–36.

<https://doi.org/10.1007/s10926-022-10049-4>

Machingura, T., Shum, D., Lloyd, C., Murphy, K., Rathbone, E., & Green, H. (2022).

Effectiveness of sensory modulation for people with schizophrenia: A multisite quantitative prospective cohort study. *Australian Occupational Therapy Journal*, 69(4), 424-435. <https://doi.org/10.1111/1440-1630.12803>

Miller, L. J., Anzalone, M. E., Lane, S. J., Cermak, S. A. & Osten, E. T. (2007). Concept

evolution in sensory integration: A proposed nosology for diagnosis. *The American Journal of Occupational Therapy*, 61(2), 135–140.

<https://doi.org/10.5014/ajot.61.2.135>

Mills, C. J., Chapparo, C., & Hinitt, J. (2020). Impact of a sensory activity schedule

intervention on cognitive strategy use in autistic students: A school-based pilot study. *British Journal of Occupational Therapy*, 84(12), 775–784.

<https://doi.org/10.1177/0308022620982888>

Mulligan, S. (2001). Classroom strategies used by teachers of students with attention

deficit hyperactivity disorder. *Physical & Occupational Therapy in Pediatrics*, 20(4), 25-44. https://doi.org/10.1080/J006v20n04_03

Yano, K., Kase, T., & Oishi, K. (2019). The effects of sensory-processing sensitivity

and sense of coherence on depressive symptoms in university students. *Health*

Psychology Open, 6(2). <https://doi.org/10.1177/2055102919871638>

Appendix A

Interview Guide

Research Question: How has OT curriculum influenced American autistic OT students and practitioners in their own utilization of sensory modulation strategies?

- 1) Are you a student or practitioner?
 - a) If you are a student, are you an OTA student or OT student?
- 2) If you are a practitioner, how many years of experience do you have?
- 3) If you are an OT/OTA student, are you on fieldwork or capstone?
- 4) When were you formally diagnosed with autism?
 - a) What age were you diagnosed?
 - b) (If diagnosed over 18) What stage of your life were you diagnosed? Ex: undergraduate, gap year, during OT/OTA school, after OT/OTA school, etc.
- 5) What sensory issues do you experience right now and/or in the past?
 - a) How do these impact your ability to participate in meaningful occupations?
- 6) When you were in OT/OTA school, did you receive sensory-specific accommodations for curriculum, fieldwork, or employment? (This includes access to reasonable accommodations, support services)
 - a) **If found out after OT/OTA school:**
 - i) What sensory-specific accommodations did you receive for employment? (depending on answer 2D)
 - b) If not, why did you not seek out accommodations?
- 7) In your time throughout school, do you feel your sensory needs were met?
 - a) **Practitioners**
 - i) How did you adjust your sensory modulation strategies from being a student to a practitioner?
 - ii) What settings have you practiced in and how have you implemented your sensory modulation strategies based on your sensory needs?
 - b) **Students**
 - i) During your time in school, how did your sensory modulation go, if at all?
 - ii) How did you cope within fieldwork environments, if applicable? (may be in 1st term)
- 8) Can you recall a time where you struggled with your sensory needs throughout your curriculum and/or fieldwork?
- 9) Did you implement any strategies that were effective at that time?
- 10) What strategies did you implement to overcome that?
- 11) How did you modulate your sensory needs before OT/OTA school vs. after/during OT/OTA school?
 - a) **If not yet taken Level 2's:**
 - i) Have you taken a pediatrics course?

- b) Did you feel the curriculum influenced how you modulated your sensory needs, if applicable?
 - c) Yes/no, please elaborate and give examples
- 12) What are some occupations you like to participate in while utilizing your sensory modulation strategies?
 - 13) How do these strategies differ outside of school and work?
 - 14) How would you improve the curriculum for students, or continuing education courses for practitioners, to better serve and support those with sensory needs?
 - 15) Is there anything else we have missed that we didn't ask?

Appendix B**Institutional Review Board Approval**

09/08/2023

Re: IRB Modification Application (09/07/2023) Study #01MSOT012 - IRB Approval Notification

Hello,

After review of your IRB Modification Application (09/07/2023) for Study ID #01MSOT012 it has now been approved by the IRB and you may proceed with your study modification as requested at this time. NOTE, this approval is limited to the change requested. Any anticipated further changes will require submission of an IRB Modification Form, with subsequent IRB approval obtained prior to initiation of those changes to the approved protocol or supporting study materials. Note this includes the potential changes that you have referenced in your 09/07/2023 email regarding the wording of your IRB approved Consent Form. Should your thesis group have such a future need in the event that the potential administration of your interview protocol via Google Forms is actually planned/identified, submission of a Modification Form with your updated Consent Form attached will be required at that time with IRB approval obtained prior to its use with subjects.

Sincerely,
Julie Grace
IRB Chair